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# Genesys Interaction Recording Solution Guide

Deploying the Screen Recording Service - Advanced Configuration

# Deploying the Screen Recording Service - Advanced Configuration

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The following sections provide advanced Screen Recording Service installation and configuration steps.

For basic instructions about how to install and configure the Screen Recording Service, see: [Deploying the Screen Recording Service](#).

### Enable Screen Recording

#### Important

Before you can start to capture and play back the screen recordings, you must make sure that you have configured the [Interaction Recording Web Services components](#) (or [Web Services components](#) if you're using version 8.5.210.02 or earlier), and [encryption](#) specifically for screen recording.

To set up recording conditions, using Genesys Administrator Extension, add the **recordingWhen** parameter to the **[screen-recording-client]** section of the Interaction Recording Web Services or Web Services Cluster application object, depending on your deployment (see [Installing RWS](#)).

When this parameter is set in the Cluster object, the recording condition applies to all agents in the environment. You can create the **recordingWhen** parameter in a **[screen-recording-client]** section of each agent object to override the settings at the environment level.

The parameter value is an expression of conditions to enable screen recording for each agent. The format is:

- For Non-voice agents: **recordingWhen** = condition1,condition2,... where condition1, condition2, etc. are a set of conditions that must all be true in order for the screen recording to be taking place.
- For Voice agents: Screen recording starts when the voice recording starts except in cases where **recordingWhen** is explicitly set to off.

#### Important

For blended agents that are configured to support the handling of both voice and non-voice interactions, GIR will perform screen recording of voice interactions only.

### Integrating with Workspace Web Edition

If your agents use Workspace Web Edition (WWE) as their desktop, screen recording must be set up as follows:

### Important

- The SR Service does not support single sign-on for WWE.
- If the following Internet Explorer 11 settings are enabled when the SR Service is used together with WWE, you must work with SR Service version 8.5.302.14 or later:
  - Enhanced Protected Mode under the Miscellaneous settings
  - Enable Protected Mode under Security Setting
  - Interaction Recording Web Services (or Web Services if you're using version 8.5.210.02 or earlier) address is added to the Local Intranet sites

Using Genesys Administrator Extension, add the following parameters to the interaction-workspace section of the Web Services Cluster application object.

### Important

If you are working with HTTP, the Screen Recording Service default port number is 8080. If you are working with HTTPS, the default port number is 443. In addition, verify that the Workspace Web Edition configuration is set to 8080 or 443.

Parameter Name	Mandatory	Description	Default Value
privilege.screen-recording.can-use	Y	Specifies whether agents can use screen recording. If set to true, the integration module is loaded and sends credentials to the client.	false
screen-recording.client.address	N	Specifies the IP address that the Screen Recording Service listens for credentials on. Valid values: 127.0.0.1, [::1]	127.0.0.1
screen-recording.client.port	N	Specifies the port that the Screen Recording Service listens for credentials on.	443
screen-recording.client.ping-interval	N	Specifies the interval, in milliseconds, between ping requests to the Screen Recording Service.	5
screen-recording.client.max-attempts	N	Specifies the maximum number of attempts to establish	5

Parameter Name	Mandatory	Description	Default Value
		communication with the Screen Recording Service. <b>Note:</b> In a Citrix environment, set the value of this parameter to 15.	
screen-recording.client.secure-connection	N	Specifies if a secure connection will be made to the Screen Recording Service using HTTPS.	true
screen-recording.client.server-url	N	Defines the Interaction Recording Web Services (Web Services) server address that the Screen Recording Service will use for communication.	

## Integrating with Workspace Desktop Edition

If your agents use Workspace Desktop Edition as their desktop, screen recording must be set up according to the instructions in the [Workspace Desktop Edition Deployment Guide](#).

### Important

The SR Service does not support single sign-on for Workspace Desktop Edition.

## Enable Screen Recording for a Contact Center

To enable the screen recording feature for a given Contact Center refer to the [Configuration for Screen Recordings > Configuring the Interaction Recording Web Services Parameters](#) section.

## Advanced Installation Procedures

### Creating Self-Signed Certificates

During installation the SR Service can create self-signed certificates to be used as local host connections. To do this, select the **Use HTTPS self-signed certificates** check box in the advance installation. For the SR Service version 8.5.345.24 and later, selecting the **Standard** option installs SR Service in the HTTPS mode and creates a self-signed certificate.

To create self-signed certificates as local host connections, following installation, perform the following:

1. Open a command window as an Administrator.

2. Navigate to the `<install_dir>\Certificates\Self-Signed` directory.
3. Run the `create_certificates.bat` file. This creates a set of unique self-signed certificates.
4. Run the `install_certificates.bat` file. This installs the new self-signed certificates to Windows trusted certificates store.

### Important

- If the SR Service is installed with self-signed certificates for the local host server, the certificates are automatically imported into the Firefox certificate database. If Firefox is installed after the SR Service is installed, the certificates must be imported manually. To import the self-signed certificates into the Firefox database, run the following script as an administrator `<install_dir>\Certificates\Firefox\add_certificates.bat`.
- When the SR Service starts, it will attempt to read the certificate files `server.pem` and `serverIp6.pem` in the `<install_dir>\Certificates` directory. If these files are missing, the SR Service will run in HTTP mode instead of HTTPS mode.

## Installing Your Own Certificates

If desired, you can use your own certificates as follows:

1. Provide a certificate for the IPv4 host, 127.0.0.1, in the `<install_dir>\Certificates\server.pem` file.
2. Install the `.pfx` form of this certificate to the local certificates store as a "Trusted Root Certification Authority" file.
3. Provide a certificate for the IPv6 host, `:::1`, in the `<install_dir>\Certificates\serverIp6.pem` file.
4. Install the `.pfx` form of this certificate to the local certificates store as a "Trusted Root Certification Authority" file.
5. The PEM certificate files should include both the private RSA key and the certificate itself. **[+] Show an example.**

```
-----BEGIN RSA PRIVATE KEY-----
.
.
.
-----END RSA PRIVATE KEY-----
-----BEGIN CERTIFICATE-----
.
.
.
-----END CERTIFICATE-----
```

### Important

When the `.pem` certificates must be protected by a password, the password is configured in the `config.json` file using the `certificatePassword` parameter. The default `certificatePassword` is `genesyscreenrecording`. For more details, refer to the

**Client Side parameters** table in step #2 of the Advanced Configuration for the Screen Recording Service section.

## Creating Self-Signed Certificates to support IP Loopback Addresses other than 127.0.0.1

SRS can be configured so that its Authentication Server uses Loopback IP Addresses other than 127.0.0.1. The HTTPS Certificates that are created by default only work if SRS is configured to use the Loopback IP Address 127.0.0.1. To use SRS with Loopback Addresses besides 127.0.0.1 and HTTPS, new HTTPS Certificates must be created specifically for the Loopback IP Address that SRS is using.

To create self-signed certificates with Loopback addresses other than 127.0.0.1, following installation, perform the following:

1. Open a command window as an Administrator.
2. Navigate to the `<install_dir>\Certificates\Self-Signed` directory.
3. Run **uninstall\_certificates.bat** to remove the existing certificates.
4. Run **create\_certificates.bat** and pass a value for the **IPV4\_HOST** parameter. Below is an example to create certificates for 127.1.1.2:

```
create_certificates.bat -IPV4_HOST 127.1.1.2
```

5. Run **install\_certificates.bat** to install the new certificates. This installs the new self-signed certificates to the Windows trusted certificates store.
6. Configure SRS to use the newly created certificates. Please see the **authenticationCertificate** option in [Advanced Configuration for the Screen Recording Service](#) for more details.
7. Restart the Genesys SR Service Windows service.

## Advanced Configuration for the Screen Recording Service

Some Screen Recording Service configurations are managed locally on the system (that is, using the config.json configuration file). Other configurations are managed centrally. Advanced configuration should be performed using the Interaction Recording Web Services or Web Services Cluster application object, depending on your deployment (see [Install RWS](#)) in Genesys Administrator Extension. All the configuration parameter values should be in JSON notation. More information about how JSON escapes rules can be found here: <https://msdn.microsoft.com/en-us/library/dn921889.aspx>.

### Important

Screen Recording Service does not support the use of System Proxies configured via

PAC (Proxy Auto-Configuration) files.

### Important

The default port number for SRS is 443. If this port is used by another application, you must configure the **authenticationPort** and **authenticationPortIp6** parameters to use a different port. The following parameter for Agent Desktop must also be changed accordingly:

```
[interaction-workspace] screen-recording.client.port
```

1. If your server uses a self-signed certificate, set the **certificate** parameter to the path on the file system where the pem file is stored.
2. Edit the local **config.json** file on the Screen Recording Service machine, and add the client parameters. **Note:** The following parameters should ONLY be configured locally and NOT using GAX. Please note that in a multiple user SR Service deployment these settings will take effect for all users using the system.

### Important

All parameter names are case sensitive.

Name	Mandatory	Description	Default value
addressType	N	<p>Enables the identification of the SR Service for monitoring and reporting purposes on Interaction Recording Web Services (Web Services). addressType supports the following options:</p> <ul style="list-style-type: none"><li>• fqdn - Use fully qualified domain name.</li><li>• ip - Use IPv4.</li><li>• ip6 - Use IPv6.</li></ul> <p><b>Note:</b> With addressType you can also provide a custom name to identify a specific machine (for example, pc-id-1).</p>	fqdn

Name	Mandatory	Description	Default value
allowedHosts	N	<p>Represents a list of allowed host names to be configured as the SRS Interaction Recording Web Services (Web Services) server address using POST API. The value can be a single address, a list of specific addresses or a wild card.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>When SRS receives the server configuration parameter from Workspace Web Edition (WWE) after the agent logs in, it will check if the URI matched the allowedHosts configuration parameter. If there is a match, it will establish a connection to the Genesys Web Services with the information provided regardless of whether or not the Server parameter is configured locally.</li> <li>If the parameter does not match, the SR Service will only use the Server parameter if it is configured.</li> <li>If the Server parameter is not configured, the SR Service will not establish a connection with Interaction Recording Web Services (Web Services).</li> </ul>	https://*.genesyscloud.com

Name	Mandatory	Description	Default value
		<ul style="list-style-type: none"> <li>If the server parameter is not configured in the <b>config.json</b> file and it is passed in real time as part of the login POST API, you must update the <code>allowedHosts</code> so that it matches the server address of Interaction Recording Web Services (Web Services) in the actual deployment.</li> <li>You can configure multiple host URLs for <code>allowedHosts</code> in the manner in which JSON presents multiple values (<code>[ "URL1", "URL2", . . . , "URLN" ]</code>). For example, <code>{ "name": "allowed Hosts", "value": [ "URL1", "URL2" ] }</code>.</li> </ul>	
allowedOrigins	N	<p>Specifies the approved CORS Origin headers that Screen Recording Service approves. If it is not provided, the * character is set as the default, which means any request will be approved, with or without origin header.</p> <p>If it is provided, the value can be a single origin, or a list of approved origins, that is used to approve the CORS requests. The defined <b>server</b> parameter is always added to the list of approved origins automatically.</p>	*
authenticationCertificate	N	The relative or full path to the authentication server's PEM certificate. If a value is available, the	'%install_dir\Certificates\server.pem'

Name	Mandatory	Description	Default value
		<p>authentication server uses it for the HTTPS connection to the agent's desktop.</p> <p><b>Note:</b> This parameter is not needed in the default Screen Recording Service installation. The Screen Recording Service uses the default self-signed certificate (<code>%install_dir\Certificates\server.pem</code>) automatically.</p>	
authenticationCertificateIp6	N	<p>The relative or full path to the authentication server's PEM certificate for IPv6. If a value is available, the authentication server uses it for the HTTPS connection to the agent's desktop.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>This parameter is not needed in the default Screen Recording Service installation. The Screen Recording Service uses the default self-signed certificate (<code>%install_dir\Certificates\server.pem</code>) automatically.</li> <li>Each host requires a unique certificate.</li> </ul>	%install_dir\Certificates\serverIp6.pem
authenticationHost	N	<p>The IPv4 Address that the Authentication Server will bind to when SRS starts if SRS is configured to use IPv4. The parameter value must be an IPv4 address within 127.0.0.0/8. The IP addresses 127.0.0.0 and 127.255.255.255 are not allowed.</p>	127.0.0.1
authenticationPort	N	<p>The port used for internal</p>	<p>If using HTTP, the port is 8080. If using HTTPS,</p>

Name	Mandatory	Description	Default value
		communication with Web Services.	the port is 443.
authenticationPortIpp6	N	The port used for internal communication with Web Services.	If using HTTP, the port is 8080. If using HTTPS, the port is 443.
certificate	N	Indicates how the Screen Recording Service validates the Web Services server TLS certificate. If set to false, the Screen Recording Service will not validate the certificate. If set to true, the client will validate the certificate using the Windows certificate store when the server is using a certificate from the public CA. If set to a file path (for example, C:\\Automation\\server.pem), the Screen Recording Service will validate the certificate using a self-signed certificated when the server is using a private self-signed certificate.	true
certificatePassword	N	The password for the PEM certificate's private RSA key.	Empty
certificatePasswordIpp6	N	The password for the IPv6 PEM certificate's private RSA key.	Empty
credentialsTimeout	N	The timeout duration, in minutes, between the keep alive (GET/ Ping) requests from the agent's desktop and the Screen Recording Service. When the timeout expires, the agent's credentials are deleted from the Screen Recording Service's cache.	35 <b>Note:</b> This value must be longer than the Web Services session timeout duration for the agent's desktop. By default the Web Services session timeout is 30 minutes, and the credentialsTimeout is 35 minutes. The latter must be increased if the Web Services session timeout is increased.
diskCheckInterval	N	The interval, in seconds, between disk space checks.	30

Name	Mandatory	Description	Default value
diskFreeSpaceLimit	N	The minimum disk space, in MB, on the client machine. When the disk space drops below this value, the screen recording will stop any active recording sessions.	2000
diskFreeSpaceThreshold	N	The amount of free space available above the defined limit, before recordings can be restored, after dropping below the disk space limit.	500
ip6	N	Indicates whether to support IPV6 in addition to IPv4 for communication with Web Services.	true
isVlcSlowCapture	N	Indicates that VLC has delay in starting the screen recording. If set to true, the Screen Recording Service (SRS) will update the start time of the screen recording with the time the media file is created. The valid values are true and false.  <b>Warning:</b> This parameter is deprecated by <b>preLoadVlc</b> .	false
partitionedCookies	N	Enables partitioned cookie to support new changes in the Google Chrome browser related to sharing of third-party cookies. The configuration parameter, partitionedCookies, supports the following options: <ul style="list-style-type: none"> <li>• <b>0</b> - disabled (never add the Partitioned cookie attribute)</li> <li>• <b>1</b> - enabled (always add the Partitioned</li> </ul>	2

Name	Mandatory	Description	Default value
		<p>cookie attribute)</p> <ul style="list-style-type: none"> <li>• <b>2</b> - auto (enable the Partitioned cookie attribute conditionally when Chromium version requires it; this is the default) <ul style="list-style-type: none"> <li>• If Chrome/Edge version is 118 or higher, partitionedCookies will be enabled.</li> <li>• If Chrome/Edge version is lower than 118, partitionedCookies will be disabled.</li> <li>• For Firefox, partitionedCookies will be enabled for all versions.</li> </ul> </li> </ul>	
peer_server	N	<p>The server base url of the backup data center. The default port is 80; to use a different port, use the url:port format.</p> <p>This value will be overridden if supplied by the client application.  <b>Note:</b> This parameter is not applicable for single data center deployments.</p>	Empty
postProcessingSavePath	N	<p>The post processing temp location. When used as a UNC path, verify that the computer running SRS (SYSTEM account) has read/write permissions.</p>	%LOCALAPPDATA%/Genesys/SRS (C:/Users/<user_name>/AppData/Local/Genesys/SRS)
preLoadVlc	N	<p>Decides whether to load VLC process in advance after the agent logs in. Valid values are true and false.</p>	false

Name	Mandatory	Description	Default value
		<b>Warning:</b> Only configure this parameter if instructed by Genesys.	
proxyServerHost	N	The proxy server hostname or IP address.	Empty
proxyServerPort	N	The proxy server port.	Empty
proxyServerUsername	N	The username to connect to the proxy server.	Empty
proxyServerPassword	N	The password to connect to the proxy server.	Empty
reEncodingTimeoutSeconds	N	Specifies the number of seconds that Screen Recording Service will wait for VLC to finish processing a screen recording after a call that includes pause and resume operations. Valid values are any integer greater than 0.  <b>Warning:</b> Only configure this parameter if instructed by Genesys.	120
rwsRetryBeforeSwitchOver	N	The number of times SRS will attempt to connect to the primary RWS before switching over to RWS in the backup data center and vice versa.	1
sendLogToGWS	N	Disables the sending of an error log to Interaction Recording Web Services (Web Services) from the SR Service.	false
server	N	The server base url. The default port is 80; to use a different port, use the url:port format.	Empty
sharedSavePath	N	The Shared folder. The location in which recordings are saved to be uploaded. When	<Installation_dir>

Name	Mandatory	Description	Default value
		used as a UNC path, verify that the computer running SRS (SYSTEM account) has read\write permissions.	
statusTimeout	N	The timeout duration, in seconds, between the keep alive GET/ Ping requests from the agent's desktop and the Screen Recording Service.	60
systemMetricTimeout	N	The timeout duration, in seconds, for reading the system metrics. On a slow machine, set a higher timeout value to avoid timing out from reading the system metrics.	5
userSavePath	N	The user recordings temp location. The location must be a local folder. If a non-default location is used, verify that the user has read\write permissions.	%LOCALAPPDATA%/Genesys/SRS (C:/Users/<user_name>/AppData/Local/Genesys/SRS)
useSystemProxy	N	If this value is true, the Screen Recording Service uses the Windows System Proxy settings.	false
vlcHttpTimeout	N	The HTTP request timeout, in seconds, for VLC start and stop recording commands.	10
vlcPortBegin	N	The beginning of the port range for the VLC http interface.	4916
vlcPortEnd	N	The end of the port range for the VLC http interface.	65530

### Important

Proxy server parameters specified in the config.json file take precedence over the **useSystemProxy** parameter.

3. In the most basic configuration, you will not need to add the following parameters, they are all optional. However, if you intend to use any of the server parameters, use Genesys Administrator Extension, and follow the next steps:
  - a. At the Environment level, locate the Interaction Recording Web Services or Web Services Cluster application object, depending on your deployment (see [Install RWS](#)).
  - b. Edit the application object, and create a new section named **screen-recording-client**. The following table provides an example of the **screen-recording-client** section.

### Important

All parameter names are case sensitive.

Name	Mandatory	Description	Default value
CaPath	N	The path for the authority PEM certificate file used for verification of encryption certificates. If not present, verification will not take place.	false
cleanupPolicy	N	Specifies the method for managing failed screen recording files on the Client machine. The available values are: <ul style="list-style-type: none"> <li>• delete - Deletes the recording from the local drive, regardless if the upload was successful or not.</li> <li>• keep - Deletes successfully uploaded recordings. Recordings whose upload failed are kept in the <b>Recordings</b> folder and retried until they are successfully uploaded.</li> <li>• keepForever - All</li> </ul>	keep

Name	Mandatory	Description	Default value
		<p>recordings are permanently stored on the local drive. Successfully uploaded recordings are stored in the <b>Uploaded</b> sub-folder. Recordings whose upload failed are kept in the <b>Recordings</b> folder and retried until they are successfully uploaded.</p> <p><b>Note:</b> This setting is only recommended for debugging, as it can cause disk space to run out quickly.</p>	
clockColor	N	The color of the time stamp clock. Use HTML color codes.	0xffffffff (white)
clockFormat	N	The display format for the time stamp clock. See the <a href="#">table</a> later in this section for the valid values.	%H:%M:%S-%Y-%m-%d %Z (HH:MM:SS-YYYY-MM-DD TZ)
clockOpacity	N	How non-transparent the time stamp clock displays. Valid values: 0-255	150
clockPosition	N	The position for time stamp clock. Valid values: 0=center, 1=left, 2=right, 4=top, 8=bottom. You can also use combinations of these values—for example, 6 = top-right.	8 (bottom-center)
clockSize	N	<p>The font size for the timestamps written to the screen.</p> <p><b>Note:</b> This option is available if the <code>timeStamp</code> option is set to <code>true</code>.</p>	40

Name	Mandatory	Description	Default value
delayShutdown	N	The time, in seconds, to delay shutting down the SRS and the system if the <b>uploadPolicy</b> parameter is set to <b>immediate</b> . This allows all the screen recording files to upload before the shutdown starts. The maximum value is 125 seconds (limited by Windows).	15
encodingLevel	N	The H.264 encoding level restriction. Valid values: 10,11,12,13,20,21,22,30,31,32,40,41,42,50,51. For more information, see <a href="#">H.264/MPEG-4 AVC Levels</a> .	31
encodingProfile	N	The H264 encoding profile. Valid values: baseline, main, high.	high
folder	N	The folder name where the media is uploaded in the WebDAV server.	/
fps	N	Frames per second.	1
grayScale	N	Indicates whether to record the screen in color or gray scale. Set to <b>true</b> to record in gray scale. Set to <b>false</b> to record in color.	false
ignoreCertificateVerificationErrors	N	Ignores errors that occur during certificate verification for screen recording encryption. This option is used only when certificate verification is enabled by configuring the <b>CaPath</b> parameter. Valid values: <ul style="list-style-type: none"> <li><b>true</b>: The errors that occur during certificate verification will be ignored with a warning message</li> </ul>	true

Name	Mandatory	Description	Default value
		<p>being logged.</p> <ul style="list-style-type: none"> <li>false: The errors that occur during certificate verification will not be ignored.</li> </ul>	
isACWEnabled	N	<p>Indicates whether to record the agent when they are in the After Call Work (ACW) state.</p> <p><b>Note:</b> You must also configure the <b>wrap-up-time</b> parameter under the T-Server or Agent Login object. (The Agent Login object is not supported for deployments using SIP Cluster.) For more information, see <a href="#">Agent Login</a> on the <a href="#">Deploying SIP Server for GIR</a> page.</p>	<p>true</p> <p><b>Note:</b> If <b>isACWEnabled</b> is set to any value other than false, then the value is true.</p>
keepAspectRatio	N	<p>Indicates whether to keep the original aspect ratio or stretch the video to fill the screen if the screen resolution is large than the maximum resolution, and the screen is down scaled.</p>	true
logsToKeep	N	<p>The number of log files to keep.</p>	10
logLevel	N	<p>The logging level. Set to one of the following: debug, info, warning, error, critical. Only messages with a level set equal to or above the defined level will be logged.</p>	info
maxDurationMinutes	N	<p>The maximum duration, in minutes, before slicing a screen recording file.</p>	<p>According to the selected qualityPreset:</p> <p>low-180 standard-120 high-75</p>
maxHeight	N	<p>The maximum height resolution in pixels. The client will always use the lower resolution defined by</p>	1080

Name	Mandatory	Description	Default value
		either the <b>maxHeight/maxWidth</b> parameters or the <b>resolutionScale</b> parameter.	
maxLogSize	N	The maximum size, in MB, of the log file before a new log file is created. The old log file is named with the .1 extension. Set the value to 0 if you do not want to limit the log file size.	5
maxWidth	N	The maximum width resolution in pixels. The client will always use the lower resolution defined by either the <b>maxHeight/maxWidth</b> parameters or the <b>resolutionScale</b> parameter.	1920
multipleMonitorsEnabled	N	Indicates whether to record on all available monitors. If set to false, the client will record on the primary display monitor only.	true
qualityPreset	N	<p>Defines the desired bitrate, depending on the agent's screen resolution. Valid Values:</p> <ul style="list-style-type: none"> <li>low—Emphasis is on storage capacity, and text is readable 90% of the time. For example, 120 kbit/s for 1920 x 1080 resolution with color.</li> <li>standard—Text should be readable 100% of the time with normal use. For example, 150 kbit/s for 1920 x 1080 resolution with color.</li> </ul>	standard

Name	Mandatory	Description	Default value
		<ul style="list-style-type: none"> <li>high—Emphasis is on quality, and text should be readable 100% even on a high movement environment. For example, 190 kbit/s for 1920 x 1080 resolution with color.</li> </ul> <p>See the <a href="#">table</a> later in this section for the full list of preset examples.</p>	
recordingWhen	N	<p>An expression from configuration states when screen recording should be taking place for a particular recording client. The format is:</p> <p><b>recordingWhen=</b>  <i>condition1,condition2,...</i>                      where  <i>condition1,condition2,...</i>,                      are a set of conditions that must all be true in order for the screen recording to take place. In other words:                      Screen Recording Active = condition1 &amp;&amp; condition2 &amp;&amp; ...</p> <p><b>Note:</b> If the state of any of the conditions is unknown (occurs only before first determining agent state, so limited to initial state), then the state of screen recording is unknown. See the <a href="#">table</a> later in this section for the full list of conditions.</p>	random_voice(100)
resolutionScale	N	<p>Used to scale the screen size. Setting resolutionScale to 0.5 will resize the screen resolution in half. Setting it to 1 will do nothing. The client will always use the lower resolution defined by either the <b>maxHeight/maxWidth</b> parameters or the <b>resolutionScale</b></p>	1

Name	Mandatory	Description	Default value
		parameter.	
rwsFailedRecordingRetrySleep	N	The time, in minutes, to sleep before retrying recordings that failed to upload.	15
rwsRetryBeforeSwitchOver	N	The number of times SRS will attempt to connect to the primary RWS before switching over to RWS in the backup data center and vice versa.	1
sleepNoConnection	N	The maximum time, in minutes, that the client will sleep if there is no connection with the server before attempting to reconnect.	1
sleepNoNewVersion	N	The time, in minutes, that the client updater thread will sleep if a new version is not available.	1440(24H)
slowMachine	N	Indicates whether the Screen Recording Service is installed on a slow machine, so that the extra time is available to save the video files before closing the client.  <b>Note:</b> slowMachine has been deprecated by vlcCloseTimeout as of 8.5.302.14.	false
softwareChecksum	N	The SHA512 checksum of the latest software setup file.	Empty
softwareUrl	N	The URI used to fetch the latest Screen Recording Service software installation package.	None
softwareVersion	N	The latest Screen Recording Service software version number.	Empty
systemMetricTimeout	N	The timeout duration, in seconds, for reading the system metrics. On	5

Name	Mandatory	Description	Default value
		a slow machine, set a higher timeout value to avoid timing out from reading the system metrics.	
timeout	N	The timeout duration, in seconds, for HTTP requests. This value must be bigger than the cometD Server request timeout.	60
timeStamp	N	Indicates whether a time stamp will be water marked on the video.	false
updateWhen	N	<p>Determines when to run software update when available. Available options are:</p> <ul style="list-style-type: none"> <li>• restart - The safest option in order to not to loose any recording. With this option the upgrade will be installed during the next system restart.</li> <li>• logout - Runs software update once all agents have logged out. If the agent logs in before the update is complete, they risk losing the screen recording session. In this case, the SR Service (SRS) will be restarted after the update is complete.</li> <li>• immediate - Will shut down SRS and install the new version regardless of the current state (that is, even if a recording is taking place). In this case, SRS will be</li> </ul>	restart

Name	Mandatory	Description	Default value
		<p>restarted after upgrade is complete.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>To receive a new version of the SR Service, you must first log into Workspace Web Edition (WWE). Use the <b>immediate</b> option with caution. Since the SR Service is restarted immediately, this may cause screen recordings to be lost and may require the agent to logout and login again to restore the screen recording operation. If possible always use the <b>logout</b> or <b>restart</b> option.</li> <li>If updateWhen is set to <b>restart</b> and the system is restarted before all the SRS installation files are downloaded, the download process continues after the system is restarted. However, the software is updated only during the next system restart.</li> </ul>	
uploadPolicy	N	Specifies the screen recording upload policy. If set to window, the screen recording files are uploaded to storage during the times specified by the <b>windowStartTime</b> and <b>windowEndTime</b> parameters. If set to immediate, the files	immediate

Name	Mandatory	Description	Default value
		<p>are uploaded immediately; however, after the agent's last call, the Screen Recording Service needs some time to upload the recording to the server before the Agent's desktop shuts down. The amount of time needed depends on the duration of the last call and network speed. Genesys recommends to estimate one minute for every minute of screen recording on a network with 150 kbit/s per second and upload speed approximate to 20 KB per second. For example, if the last screen recording lasted 10 minutes, and the network speed is 300 kbit/s (~40KB/s), five minutes is required.</p> <p><b>Note:</b> If the Agent's PC is shutdown before the upload is completed, the recording will be uploaded on next PC start up.</p>	
videoBitrate	N	<p>Encoding bitrate. Use this parameter to override the default bitrate that is calculated based on the resolution and the selected <b>qualityPreset</b> value.</p>	150 kbit/s for 1920 x 1080 resolution (standard preset, color recording)
vlcCloseTimeout	N	<p>Sets the amount of time the SR Service will wait, after stopping a screen recording, before closing VLC. This time is required to ensure VLC completes writing the file correctly. This time should not be changed unless the SR Service is running on a very</p>	2

Name	Mandatory	Description	Default value
		slow machine, and the screen recording file is invalid but without an error in the log. If such a scenario occurs, increase the time the SR Service must wait before closing VLC.	
windowEndTime	N	Specifies the upload end time, in the local time. The format is hh:mm:—for example, 23:00. This parameter is mandatory for the Window upload policy.	Empty
windowStartTime	N	Specifies the upload start time, in the local time. The format is hh:mm:—for example, 23:00. This parameter is mandatory for the Window upload policy.	Empty

### Video File Size/Compression Optimization Estimate

The following table provides file size estimates according to the selected **Quality Preset**, FPS and color scheme, given a specific resolution.

Preset	Color	Resolution	Frame Rate	Encoding Level	Average File Size MB/Minute
Low	Color	1920x1080	1	High 4.1	0.864
Standard	Color	1920x1080	1	High 4.1	1.055
High	Color	1920x1080	1	High 4.1	1.37
Low	Grayscale	1920x1080	1	High 4.1	0.608
Standard	Grayscale	1920x1080	1	High 4.1	0.732
High	Grayscale	1920x1080	1	High 4.1	0.886

### Recording Conditions

The following table describes the recording conditions for the **recordingWhen** parameter:

Condition	Description
off	A special case. Cannot appear with other conditions. When specified as such, screen recording never occurs for the agent.

Condition	Description
loggedin	When the agent is logged in
DNDoff	When agent sets DND (do not disturb) to off
ready(any)	True when any media type is set to ready, or list(ready media).count != 0
ready(abc)	True when the abc media type is set to ready
ready(abc,...xyz)	A list of media types that are set to ready. Note that ready(abc,...xyz) = ready(abc)    ... ready(xyz).
random_voice(%)	Records the agent's screens based on a percentage of the total voice call volume for that agent.

### Important

Each individual setting's key/value can be overwritten at the agent level by setting the Person object with the Annex of the same section name (**screen-recording-client**).

## Clock Format Directives

The follow table lists and describes the values that are available for the **clockFormat** parameter.

Directive	Meaning
%a	Locale's abbreviated weekday name.
%A	Locale's full weekday name.
%b	Locale's abbreviated month name.
%B	Locale's full month name.
%c	Locale's appropriate date and time representation.
%d	Day of the month as a decimal number [01,31].
%H	Hour (24-hour clock) as a decimal number [00,23].
%I	Hour (12-hour clock) as a decimal number [01,12].
%j	Day of the year as a decimal number [001,366].
%m	Month as a decimal number [01,12].
%M	Minute as a decimal number [00,59].
%p	Locale's equivalent of either AM or PM.
%S	Second as a decimal number [00,61].
%U	Week number of the year (Sunday as the first day

Directive	Meaning
	of the week) as a decimal number [00,53]. All days in a new year preceding the first Sunday are considered to be in week 0.
%w	Weekday as a decimal number [0(Sunday),6].
%W	Week number of the year (Monday as the first day of the week) as a decimal number [00,53]. All days in a new year preceding the first Monday are considered to be in week 0.
%x	Locale's appropriate date representation.
%X	Locale's appropriate time representation.
%y	Year without century as a decimal number [00,99].
%Y	Year with century as a decimal number.
%Z	Time zone name (no characters if no time zone exists).
%%	A literal '%' character.